CANDIDATE AND LISTING PRIORITY ASSIGNMENT FORM

SCIENTIFIC NAME: Eremophila alpestris strigata

COMMON NAME: Streaked horned lark

LEAD REGION: Region 1

INFORMATION CURRENT AS OF: February 2002

STATUS/ACTION (Check all that apply):
__ New candidate
_X_ Continuing candidate
    _X_ Non-petitioned
    ___ Petitioned - Date petition received: ___
        ___ 90-day positive - FR date: ___
        ___ 12-month warranted but precluded - FR date: ___
    ___ Listing priority change
        Former LP: ___
        New LP: ___
___ Candidate removal: Former LP: ___ (Check only one reason)
    ___ A - Taxon more abundant or widespread than previously believed or not subject to a degree of threats sufficient to warrant issuance of a proposed listing or continuance of candidate status.
    ___ F - Range is no longer a U.S. territory.
    ___ M - Taxon mistakenly included in past notice of review.
    ___ N - Taxon may not meet the Act's definition of "species."
    ___ X - Taxon believed to be extinct.

ANIMAL/PLANT GROUP AND FAMILY: Alaudidae

HISTORICAL STATES/TERRITORIES/COUNTRIES OF OCCURRENCE: Washington, Oregon, and British Columbia

CURRENT STATES/TERRITORIES/COUNTRIES OF OCCURRENCE: Washington and Oregon

LEAD REGION CONTACT (Name, phone number): Wendi Weber (503/231-6131)

LEAD FIELD OFFICE CONTACT (Office, name, phone number): Western Washington Fish and Wildlife Office, Dr. L. Karolee Owens (360/753-4369)

BIOLOGICAL INFORMATION:

The streaked horned lark (Eremophila alpestris strigata) was first described by Henshaw (1884). It is conspicuously more yellow beneath and darker on the back than any other subspecies of horned larks in the Pacific Northwest. This subspecies is found in lowland areas of western Washington and Oregon.

The streaked horned lark, as is typical of all horned larks, nests on the ground in sparsely vegetated sites in short-grass dominated habitats. Historically, this type of habitat was found in prairies in western Oregon and Washington. More recently, streaked horned larks have used manmade habitats for nesting, such as fallow agricultural fields, lightly to moderately grazed pastures, seasonal mudflats, airports, and dredged material islands in the Columbia River (Gabrielson and Jewett 1940; Altman 1999; Rogers 1999a). Streaked horned larks are also found in dune habitats along the coast (Rogers 1999a). This migratory species is generally believed to winter in California, but documentation is lacking (Rogers 2000).

At the time of European settlement, the streaked horned lark was described as very abundant in all of the prairies of the Puget Sound region in Washington (Suckely and Cooper 1860; Dawson and Bowles 1909) and a year-round resident in the northern Willamette Valley (Johnson 1880). In the 1940s, the species was a "very common permanent resident" in the southern Willamette Valley (Gullion 1950). The streaked horned lark was considered common in the early 1950s on the prairies of western Washington and abundant throughout the valleys west of the Cascades in Washington (Jewett et al. 1953). Historically, the streaked horned lark was considered a scarce species along the Oregon coast (Gabrielson and Jewett 1940).

The streaked horned lark is currently considered rare and has been extirpated from much of its range, particularly in Washington. Based on the anecdotal descriptions of abundance, much of this decline has occurred since the 1950s. In Washington, the streaked horned lark has been extirpated from the north Puget Sound region and the San Juan Islands.

In 2000, 58 streaked horned larks (51 males and 7 females) were detected at the 11 known breeding sites in the south Puget Sound lowlands and the outer coast; these sites had been identified in a 1999 survey (MacLaren 2000). Not all singing/displaying males successfully pair with a female, however. Consequently, the effective breeding population in Washington may be considerably fewer than a 100-pair estimate based on the number of singing males documented. No new sites were found during surveys in 2000 (MacLaren 2000).

The breeding population in Oregon is estimated to include less than 200 pairs (Altman 1999). The species is most common in the central Willamette Valley, particularly in and around Baskett Sough National Wildlife Refuge. Breeding is not known to occur in the Rogue and Umpqua Valleys in southwestern Oregon, and little information is available for the Oregon Coast. Both the Washington and Oregon estimates are based on a significant amount of survey effort.

THREATS:

A. The present or threatened destruction, modification, or curtailment of its habitat or range.

The greatest threat to the streaked horned lark is the loss of habitat. Native prairies and grasslands have been virtually eliminated throughout the range of the species as a result of human activity.

In the Willamette Valley, native grassland has been reduced from the most common vegetation type to scattered parcels intermingled with rural residential development and farmland. It is estimated that less than 1 percent of the native grassland and savanna remains (Altman 2000). Conversion of grassland to other uses, such as agriculture; homes and other incompatible uses; encroachment of woody vegetation because of fire suppression; and encroachment onto prairies by nonnative plant species such as Scot's broom (Cytisus scoparius) and sod forming grasses (Holcus sp. and Arrhenatherum elatius), have been the primary factors contributing to the loss and degradation of habitat.

In the south Puget Sound region, where most of Washington's prairies historically occurred, only 3 percent of the historic prairie is considered to be intact (Crawford and Hall 1997). In the remaining prairies, many of the native bunch grass communities have been lost to introduced pasture grasses (Russell 2000). Causes of habitat loss have included urban development, forest invasion, and conversion to agriculture (Hall 1995).

Streaked horned larks also use a variety of manmade habitats with sparse vegetation that simulate the microhabitat conditions created by native prairies. Streaked horned lark populations, however, are vulnerable because these habitats are subject to human disturbance (plowing, mowing, or recreational or military vehicle use), flooding (wetland mudflats), or are ephemeral in nature (plowed fields, bare ground in fields). Populations using these areas, therefore, may have low nesting success and may actually be population sinks.

In coastal areas, the introduction of Eurasian beach grass (Ammophila arenaria), currently found in high densities on most of coastal Oregon and Washington, has drastically altered the structure of dunes on the outer coast. The tall, dense, leaf canopy of this plant creates unsuitable habitat for streaked horned larks (Rogers 1999b; MacLaren 2000). The vegetation density of this beach grass has increased in the fore and secondary dunes where this species is likely to nest (Wiedemann 1987).

The extent of changes in streaked horned lark populations along the Columbia River is unknown. One result of flood control by the construction of dams, however, is the establishment of willows, black cottonwood, and other vegetation on sandbars where this species may have nested (Rogers 2000).

B. Overutilization for commercial, recreational, scientific, or educational purposes.

None known.

C. Disease or predation.

None known.

D. The inadequacy of existing regulatory mechanisms.

The streaked horned lark is protected by the Federal Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703 et seq.) and by State laws as a nongame species. Breeding habitat, however, receives little protection from these laws. For example, the MBTA prohibits the taking of "nests". The streaked horned lark is also listed as a State Candidate by the Washington Department of Fish and Wildlife, as a Category 3 species (species that is vulnerable and declining and could be threatened or endangered) by the Washington State Natural Heritage Program, and as a State sensitive species in Oregon. However, these designations do not provide any protection for the species.

Little of the currently occupied habitat is in public ownership with a protected status. Populations on Willapa National Wildlife Refuge and Damon Point Wildlife Management Area in Washington and Baskett Slough, Finley, and Ankeny National Wildlife Refuges in Oregon are managed for wildlife, which may be compatible with streaked horned lark needs. Streaked horned larks are also found on military lands, State parks and municipal airports. However, activities on these lands may be detrimental to streaked horned lark nesting because of mowing, herbiciding, or troop activities. A significant portion of the population in Oregon occurs on private lands, however, where no protection occurs.

E. Other natural or manmade factors affecting its continued existence.

Nesting habitat in Oregon is subject to a variety of activities that may destroy nests. Altman (1999) documented the destruction of nests by plowing and vehicles in farm fields. Nest abandonment may also occur as a result of these activities. Other human activities, including horseback riding, dog walking and training, model airplaning, and bird watching occur in the remaining prairie habitat. Miller et al. (1998) documented the presence of a well-used nature trail in the vicinity of nesting grassland birds had a negative effect on bird productivity.

Streaked horned lark nests on dredge spoil islands in the Columbia River are also likely destroyed by dredging activities, since dredged material is deposited during the nesting season in habitat with documented use by streaked horned larks (E. Cummins, Washington Department of Fish and Wildlife, pers. comm., 2000). New dredge spoil was deposited at a location where streaked horned larks occurred in 1999 near Puget Island in the Columbia River. Although streaked horned larks were observed in the vicinity in 2000, only sparse low vegetation remained on the island. In a similar situation on the Oregon side of the Columbia River, eight singing males were observed on Rice Island in June 2000. However, dredge spoil was deposited in July where the singing males had been observed. No streaked horned larks were observed all season on Sand Island (MacLaren 2000).

Introduced predators may have played a role in the decline of streaked horned larks. This species disappeared from its former breeding site at Cattle Point on San Juan Island, which has not undergone a dramatic change in vegetation. Their disappearance may be related to the introduction of several exotic species, including the Eurasian rabbit (Oryctolagus cuniculus)and the Eurasian skylark (Alauda arvensis). Feral ferrets (Mustela outorius)and red foxes (Vulpes vulpes) may also have had a significant impact on ground nesting birds. Introduction of all of these species to the island roughly coincides with the disappearance of the streaked horned lark. Also, predation on grassland bird species by domestic cats and crows at one south Puget Sound site has been documented (Russell 2000).

Four of five known streaked horned lark nesting sites in the south Puget Sound region are at active airports, including two military bases (Rogers 2000). Although regular grass mowing to meet flight path regulations may help maintain the grassland habitat, nests may be destroyed by maintenance activities. Potential airport expansions could result in further losses of some of these populations.

LAND OWNERSHIP: In Washington, one site is owned by the Service, one site by the Washington Department of Natural Resources (WDNR), five sites by the U.S. Department of Defense, two sites by municipal airports, and two are privately owned.

In Oregon, streaked horned larks are found on Baskett Slough, Ankeny and Finley National Wildlife Refuges, U.S. Army Corps of Engineers lands at Fern Ridge and two dredged material islands on the Columbia River, and Willamette Mission State Park. These lands contain perhaps 20-25 percent of the Willamette Valley population (Bob Altman, American Bird Conservancy, pers. comm., 2000). The remainder of the population is on private lands.

PRELISTING: The Service funded the WDNR to conduct surveys in Washington in 2001 and 2002 to better describe numbers and distribution of streaked horned larks. A report will be prepared for the Service at the conclusion of the surveys.

REFERENCES:

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Miller, S.G., R.L. Knight, and C.K. Miller. 1998. Influence of recreational trails on breeding bird communities. Ecological Applications 8: 162-169.

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LISTING PRIORITY (place * after number)

THREAT			
Magnitude	Immediacy	Taxonomy	Priority
High	Imminent	Monotypic genus	1
		Species	2
		Subspecies/population	3
	Non-imminent	Monotypic genus	4
		Species	5*
		Subspecies/population	6
Moderate to Low	Imminent	Monotypic genus	7
		Species	8
		Subspecies/population	9
	Non-imminent	Monotypic genus	10
		Species	11
		Subspecies/population	12

APPROVAL/CONCURRENCE: Lead Regions must obtain written concurrence from all other Regions within the range of the species before recommending changes to the candidate list, including listing priority changes; the Regional Director must approve all such recommendations. The Director must concur on all additions of species to the candidate list, removal of candidates, and listing priority changes.

Approve: Rowan Gould March 30, 2002
Acting Regional Director, Fish and Wildlife Service Date

Concur: _____ _____
Director, Fish and Wildlife Service Date

Do not concur: _____ _____
Director, Fish and Wildlife Service Date

Director's Remarks: _____

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Date of annual review: February 2002
Conducted by: L.K. Owens

Comments: _____

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(rev. 1/02)